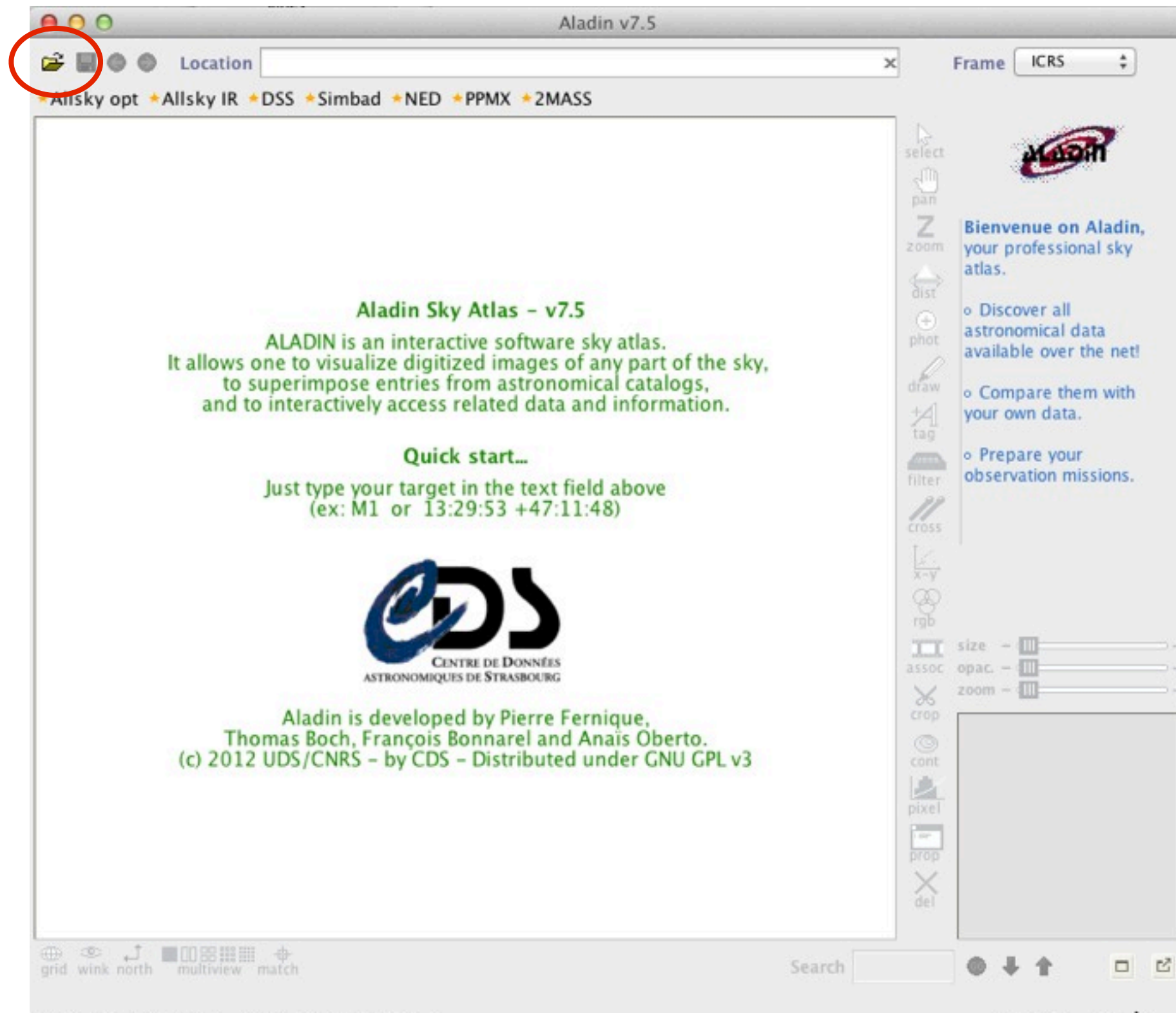


The background of the slide is a grayscale image of the Small Magellanic Cloud, a satellite galaxy of the Milky Way. Overlaid on this image are numerous small, multi-colored circles and crosses, representing HI shells. The colors used include red, green, blue, purple, and yellow. The circles vary in size, and some are accompanied by smaller crosses of the same color. The overall distribution of these markers is spread across the field of view, with some clusters and some isolated points.

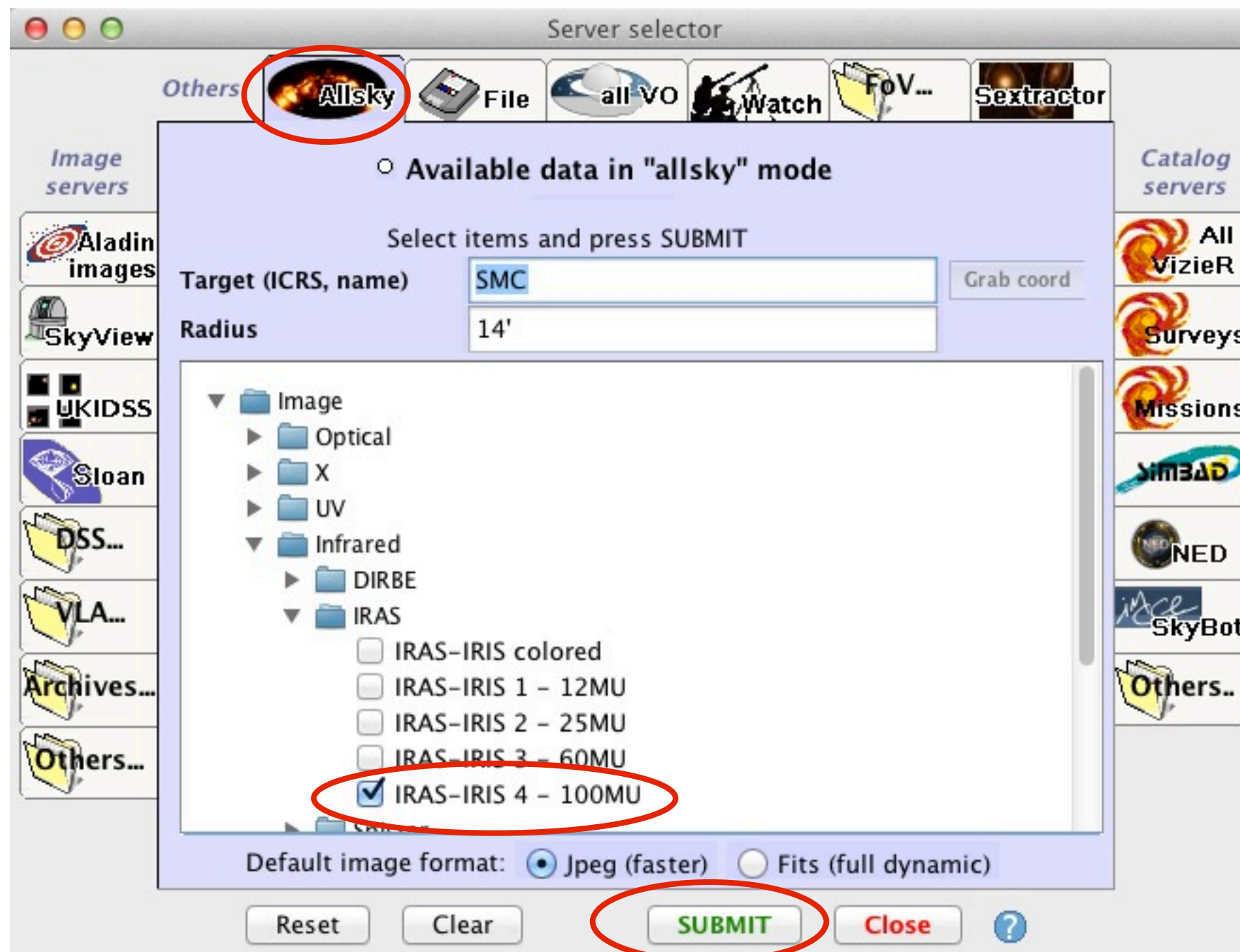
# The HI shells of the Small Magellanic Cloud

Using filters on a catalog to visualize the shell characteristics (size, position and velocity)

- Start Aladin (either at <http://aladin.u-strasbg.fr> or with the standalone software installed on your machine)
- Open the server selector by pressing the “load” button

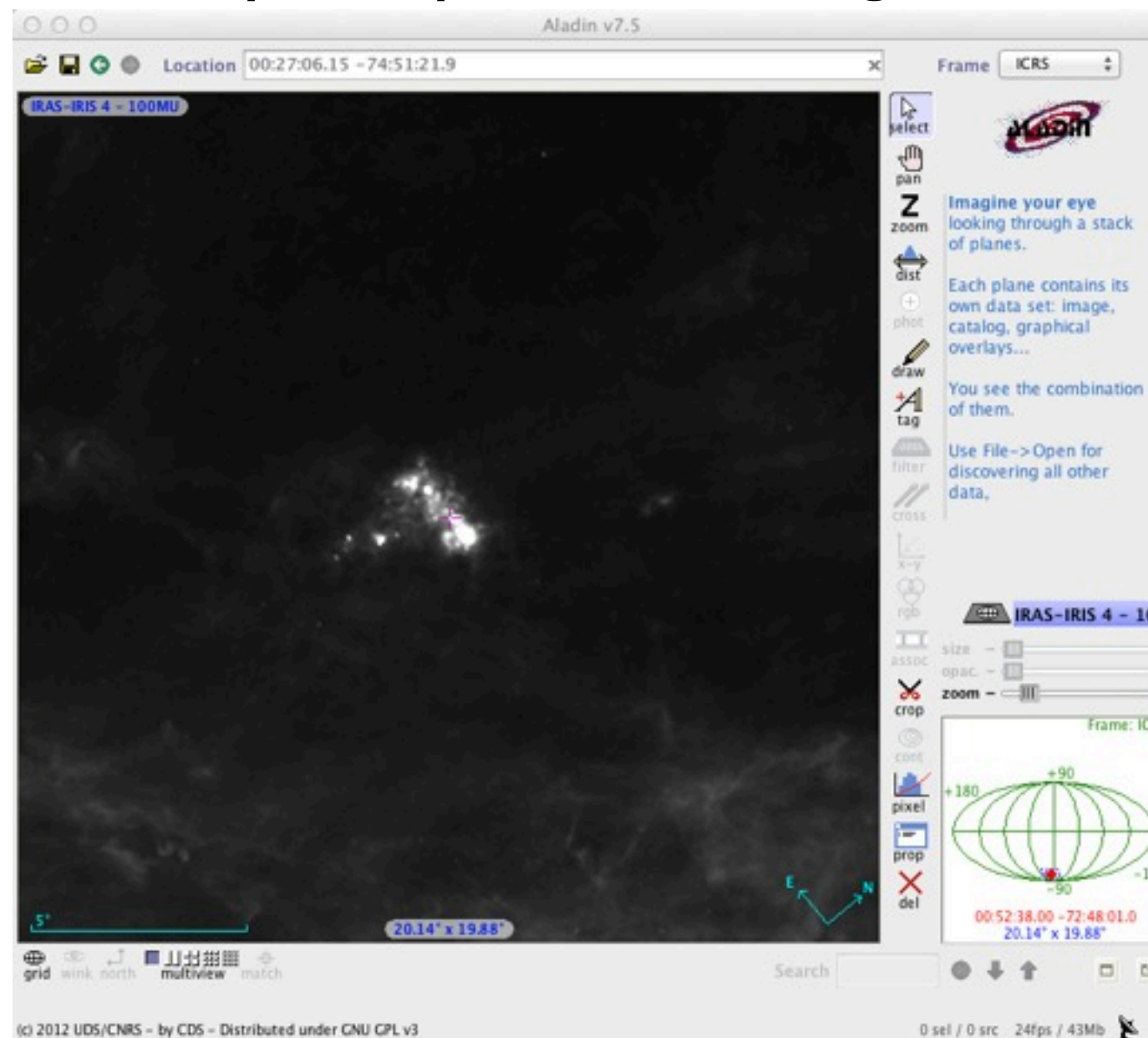


- Go to the Allsky tab
- type SMC in the target field
- Select the IRAS-IRIS 100MU image in the menu and press SUBMIT

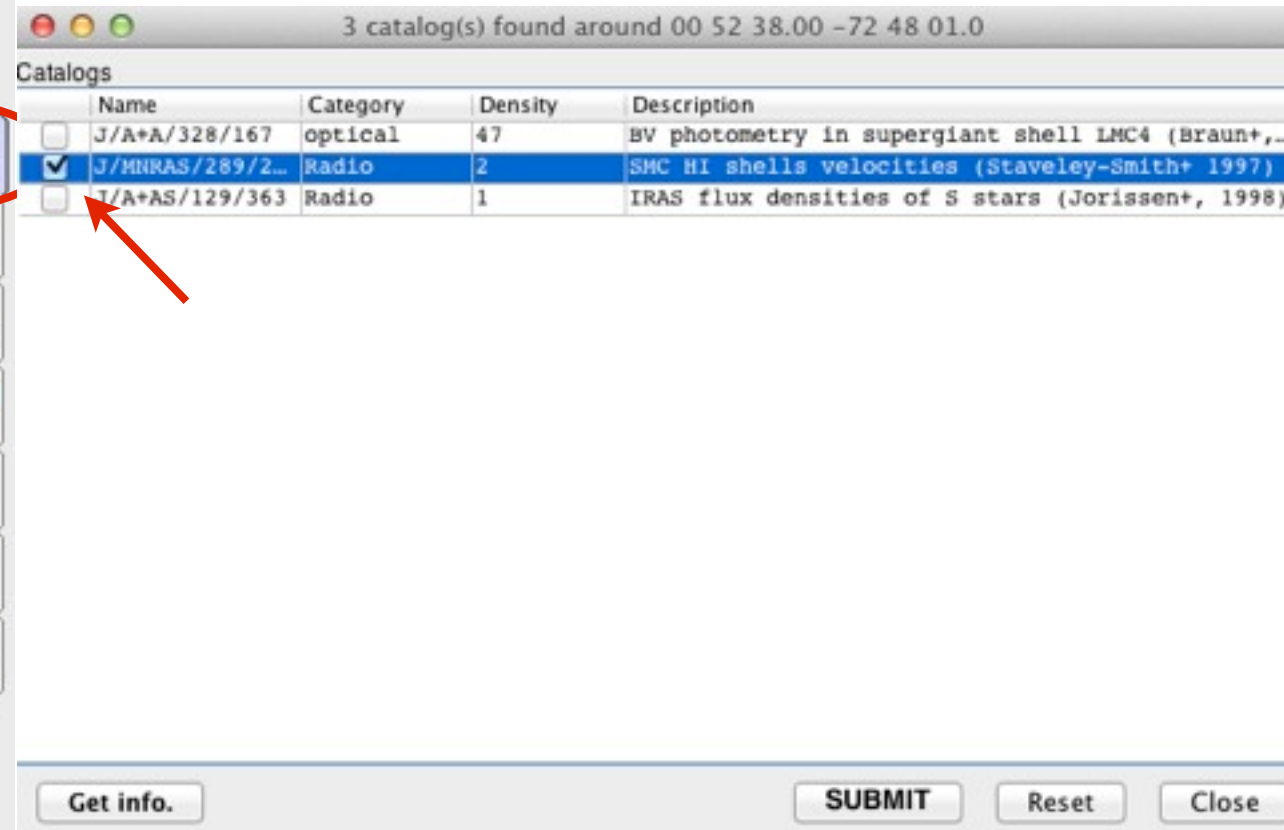
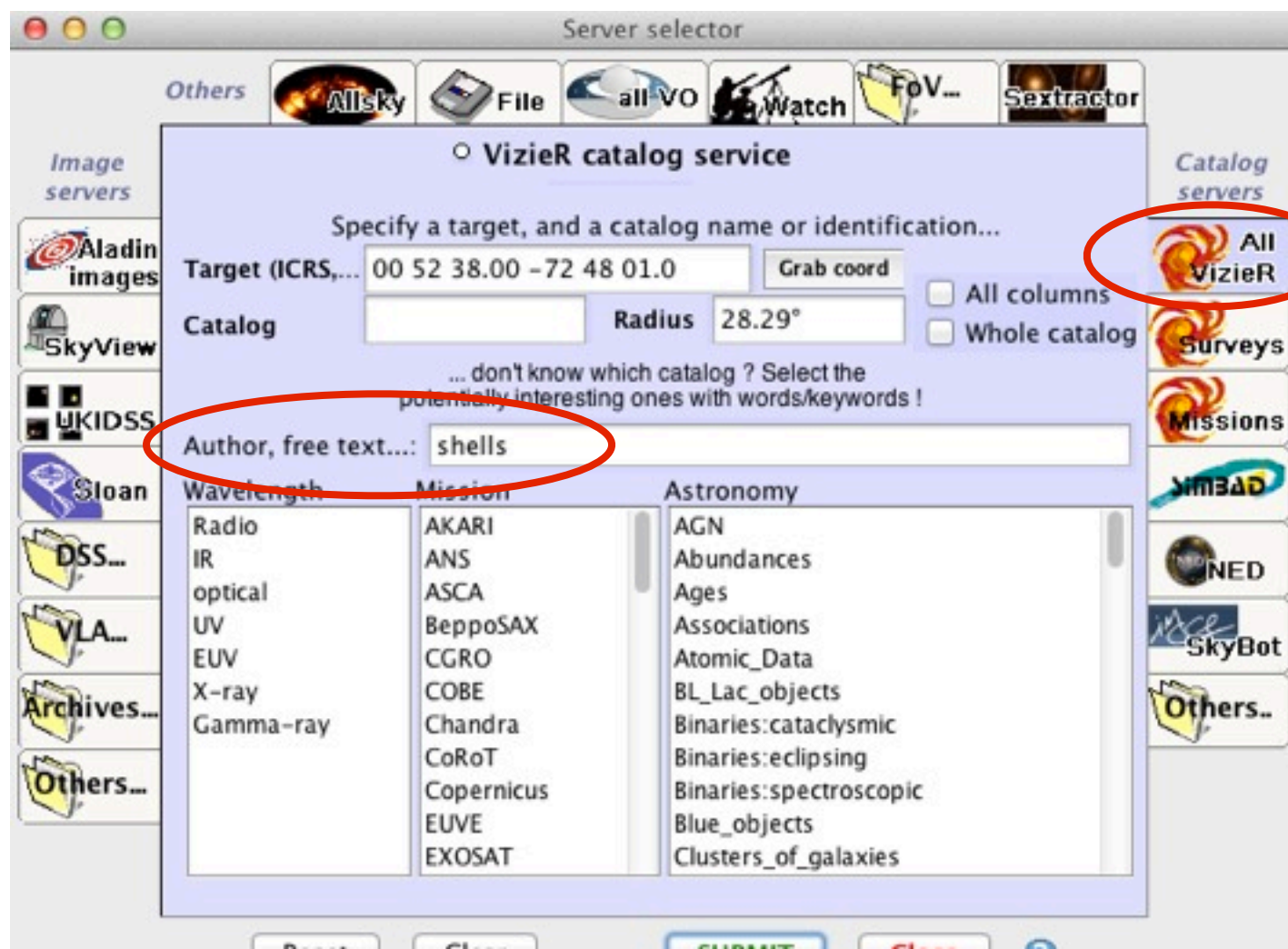




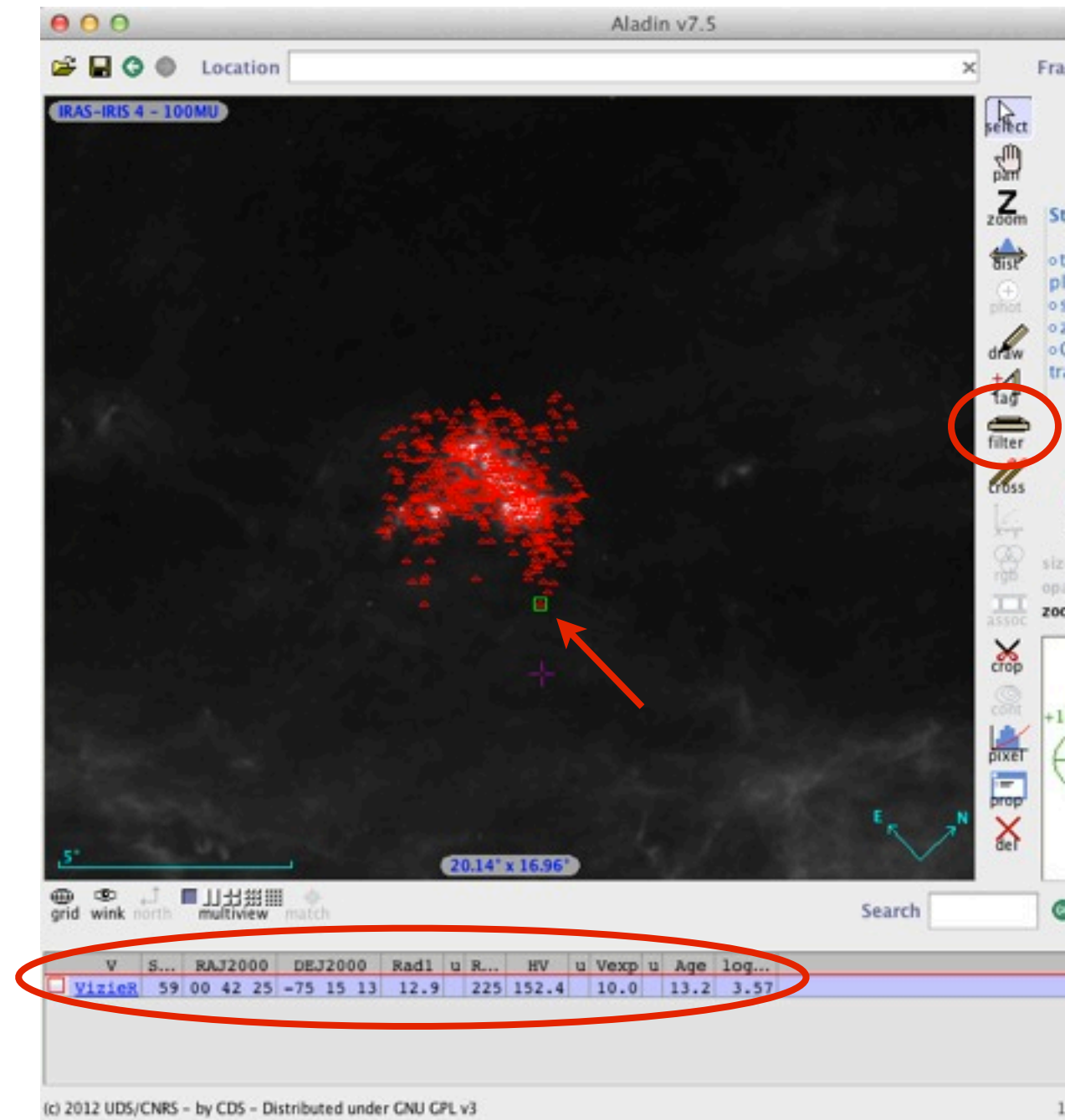
- The IRAS IRIS map at 100MU is displayed in the main window
- Unzoom (e.g. with the scrolling wheel of your mouse) to see the Small Magellanic Cloud completely
- We will now superimpose a catalogue of HI shells on it



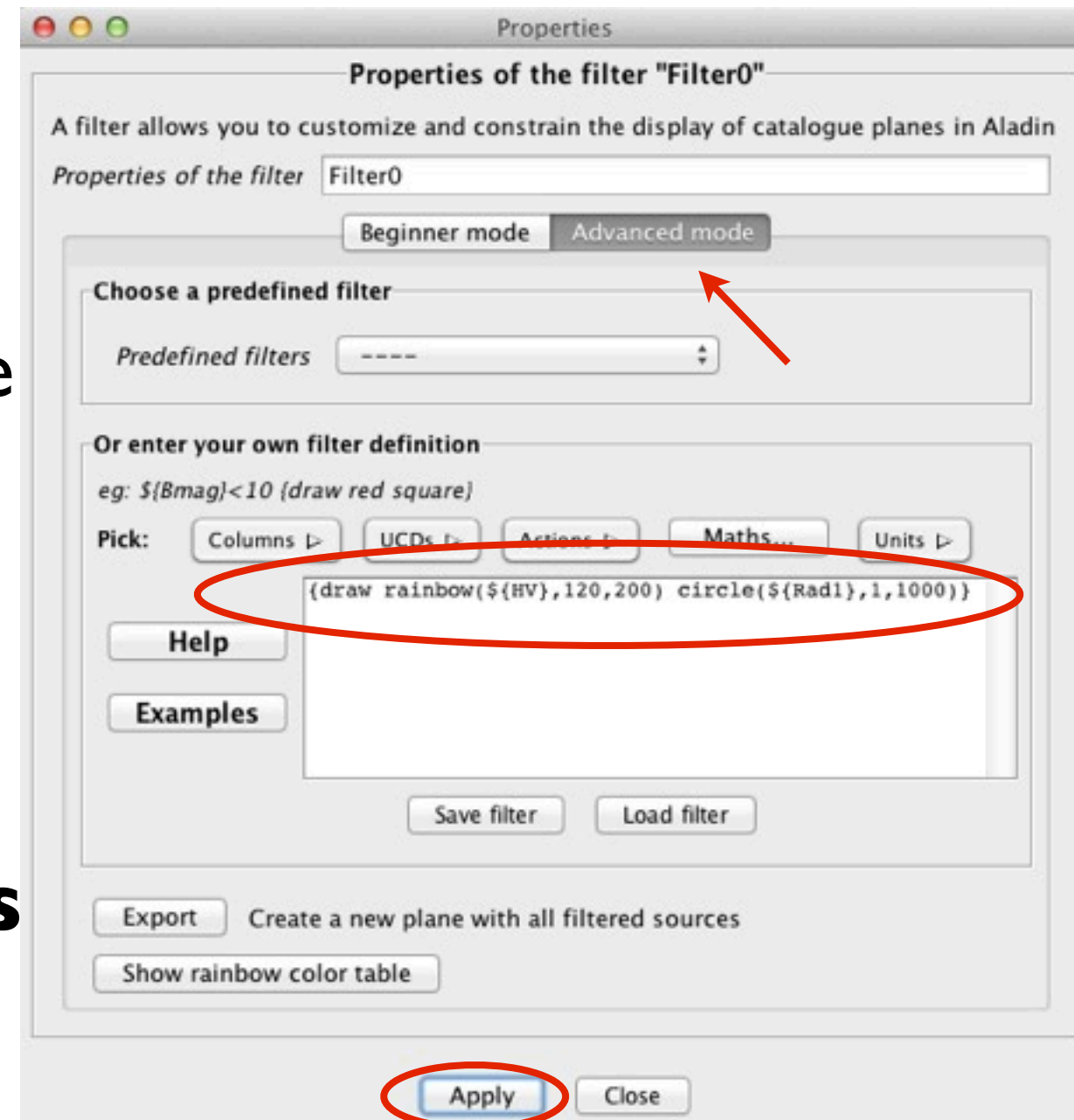
- Go back to the server selector
- Choose the **all VizieR** tab on the right
- type “shells” in the free text zone
- Press SUBMIT
- The catalogue of Staveley-Smith et al. 1997 is found
- Select it and SUBMIT



- In the display window, the catalogue is overlaid on the IRAS image
- Each point represents the center of an HI shell, but we would like to draw the shells themselves. To do so, we will use the Filter tool
- By selecting one point, you get access to the informations available in the catalogue, in the lowest part of the window.
- Click on the **Filter button**



- Select the **advanced mode**
- Write the following expression in the filter definition box:  
**`{draw rainbow(${HV},120,200) circle(${Rad1},1,1000)}`**
- This filter draws a circle which radius is proportionnal to the extension radius of the shell and which colour scales with the heliocentric velocity of the bubble (between 120 and 200 km/s) with a rainbow palette
- for more informations on the filter syntax, please press the **Help** button, see the **Examples** or look at the predefined filters
- Press Apply





We can now observe the distribution of the HI shells with their position, size and velocities. Note the colour view of the velocity gradient of the Small Magellanic Cloud

